

WE CLAIM:

1. A device for the measurement of the current in a conductor, comprising:
  - means for detecting a current,
  - means for the transmission of a signal indicative of the current,
  - electronic means for the control, acquisition and processing of such signal indicative of the current,
  - connecting means for the feeding of the device and for the communication, wherein said device includes means for the partialised feeding of such means for detecting a current.
2. The device according to claim 1, wherein said means for detecting a current include an insulating support and at least one magnetic field sensor.
3. The device according to claim 2, wherein said magnetic field sensor is a Hall sensor.
4. The device according to claim 1, wherein said means for the partialised feeding are controlled by said h electronic means for the control, acquisition and processing of said signal indicative of the current.
5. The device according to claim 1, wherein said means for the transmission of a signal indicative of the current are linked to means of adaptation of said signal.
6. Device according to claim 5, wherein said means of adaptation of said signal are connected to means of analogue-to-digital conversion.
7. The device according to claim 1, wherein said connecting means include feeding means and means of bidirectional communication.
8. The device according to claim 7, wherein said feeding means are fed by a

current transformer positioned on a conductor.

9. Device according to claim 8, wherein said conductor is a conductor exposed to measurement.
10. The device according to claim 7, wherein said feeding means are linked to an external feeding source.
11. An automatic low voltage circuit breaker including one or more devices according to claim 1, said one or more devices being connected to a communication bus, in its turn connected to a protection device through an interface.
12. A method for the for the measurement of the current in an electric conductor through a device according to claim 1, including the following cyclic phases:
  - feeding the device and bringing it in running conditions;
  - maintaining the feeding for a period of time  $\tau$ ;
  - bringing the device in a stand-by condition with feeding interruption.
13. The method according to claim 12, wherein the period of time  $\tau$  is divided in a first time fraction  $\tau_1$  of stabilisation of the sensor and in a second time fraction  $\tau_2$  of reading and transmission of the signal.